

METHODS AND APPARATUSES FOR TRANSFERRING HEAT FROM  
MICROELECTRONIC DEVICE MODULES

ABSTRACT OF THE DISCLOSURE

Methods and apparatuses for transferring heat from microelectronic device modules are disclosed. An apparatus in accordance with one embodiment of the invention can include first and second heat transfer portions positioned to face toward opposing faces of a microelectronic device module. Heat transfer fins having different length can extend away from at least one of the heat transfer portions. In one embodiment, the heat transfer fins can be integrally formed with other portions of the apparatus. In other embodiments, modules carrying the heat transfer devices can be mounted at an acute angle relative to a support structure (such as a PCB) so that heat transfer fins from one module can extend adjacent to the end region of the neighboring module. This arrangement can increase the rate at which heat is transferred away from the modules, and can increase the utilization of a limited heat transfer volume within a device, such as a computer.